

Application No.: 10/538,522
Filed: June 10, 2005
Amendment with RCE dated: May 8, 2007

This listing of claims will replace all prior versions and listings of claims in this application:

a.) Listing of Claims

1. (Currently Amended) A reflected-light microscope comprising:

a light source serving to generate an illumination light beam that can be directed through a lens along an illumination beam path and onto a sample, the lens having a pupil plane;

an imaging optics disposed along the illumination beam path and having a focal plane which optically conjugates with corresponds to the pupil plane by being a Fourier plane of the pupil plane of the lens; and

at least one attenuation element disposed in the focal plane of the imaging optics along the illumination beam path, the attenuation element comprising structure elements and reducing an illumination light power over an entire cross-section of the illumination light beam by means of the structure elements.

2. (Previously Presented) The reflected-light microscope according to claim 1, wherein at least one attenuation element comprises a grate structure or a sieve structure or a pinhole pattern.

3. (Previously Presented) The reflected-light microscope according to claim 1, wherein at least one attenuation element is a color filter.

4. (Previously Presented) The reflected-light microscope according to claim 1, wherein at least one attenuation element is a diffusion disk.

5. (Previously Presented) The reflected-light microscope according to claim 1, wherein at least one attenuation element is produced by lithography.

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6. (Previously Presented) The reflected-light microscope according to claim 1, wherein at least one attenuation element is arranged in a storage mechanism.
7. (Previously Presented) The reflected-light microscope according to claim 6, wherein the storage mechanism is a turret or a push slide or a rotatable disk.
8. (Previously Presented) The reflected-light microscope according to claim 6, wherein the storage mechanism holds several attenuation elements that exhibit different degrees of attenuation.
9. (Previously Presented) The reflected-light microscope according to claim 6, wherein the storage mechanism has a neutral position that permits the illumination light beam to pass through without being attenuated.
10. (Previously Presented) The reflected-light microscope according to claim 6, wherein the storage mechanism has a blocking position that blocks the illumination beam path.
11. (Previously Presented) The reflected-light microscope according to claim 6, further comprising a drive mechanism that controls the storage mechanism.
12. (Previously Presented) The reflected-light microscope according to claim 11, wherein the drive mechanism comprises a stepping motor.

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13. (Previously Presented) The reflected-light microscope according to claim 11, further comprising a control mechanism that controls the drive mechanism.

14. (Previously Presented) The reflected-light microscope according to claim 1, wherein the illumination light beam is automatically attenuated or blocked during lens changes.

15. (Previously Presented) The reflected-light microscope according to claim 1, further comprising at least one exchangeable optical element disposed in the illumination beam path, wherein the illumination light beam is automatically attenuated or blocked while the optical element is being exchanged.

16. (Previously Presented) The reflected-light microscope according to claim 1, wherein the reflected-light microscope is a fluorescence microscope.